# **Graphical user interface, text, application, chat or text message Description automatically generatedVisualization of customized XCI escape gene annotations**

**Step 1: Create a template**

The default template (template 1) includes columns for gene, escape state, start and end position.

**Template 1:**

|  |  |  |  |
| --- | --- | --- | --- |
| **GENE** | **STATE** | **START** | **END** |
|  |  |  |  |

**Example data:**

|  |  |  |  |
| --- | --- | --- | --- |
| **GENE** | **STATE** | **START** | **END** |
| CD99 | escape | 2691187 | 2741309 |
| ZFX | escape | 24149173 | 24216255 |
| IDS | inactive | 149476988 | 149521096 |

For template 2, the term “SAMPLE” refers to the sample or tissue of the observed gene status.

**Template 2:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **GENE** | **STATE** | **SAMPLE** | **START** | **END** |
|  |  |  |  |  |

**Example data:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **GENE** | **STATE** | **SAMPLE** | **START** | **END** |
| CD99 | escape | STMACH | 2691187 | 2741309 |
| CD99 | escape | SKINS | 2691187 | 2741309 |
| CD99 | inactive | LUNG | 2691187 | 2741309 |

Click the Text

Description automatically generated with low confidence button to download the template in csv format.

Click the A picture containing text

Description automatically generated button to download an example study in csv format.

**Step 2: Upload data set**

Graphical user interface, text, application

Description automatically generated

Populate the downloaded template with the necessary data. Note, the final file **must include the column names which reflect one of the available templates**.

**Example csv files:**

***Example A Example B***

Table

Description automatically generated Table

Description automatically generated

Click Text

Description automatically generated with medium confidence to select your csv file and upload to the application. Once uploaded, a preview of your data set should be displayed.

**Preview of upload:**

Graphical user interface

Description automatically generated

**Graphical user interface, text, application, chat or text message

Description automatically generatedStep 3: Submit data set**

Once you’ve verified your data set, select Text

Description automatically generated with low confidence.

The application will produce the following levels of information:

* **Escape frequencies and escape status based upon STATE**
* Table

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Application

Description automatically generated with medium confidence

Note: the default thresholds applied are:

* %escape ≤ 25% → Silenced (S)
* 25% < %escape < 75%  → Variable escape (VE)
* %escape  ≥ 75% → Escape (E)

These can be changed with the sliders in the left side panel.

* **GWAS associations of selected genes of interest**

1. **Select the** Graphical user interface, application

   Description automatically generated**tab**
2. **Select genes of interest in left side panel**

**Graphical user interface, application

Description automatically generated**

1. **Results:**

**Graphical user interface, text, application, email

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* **Visual annotation of XCI status**

**Timeline

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